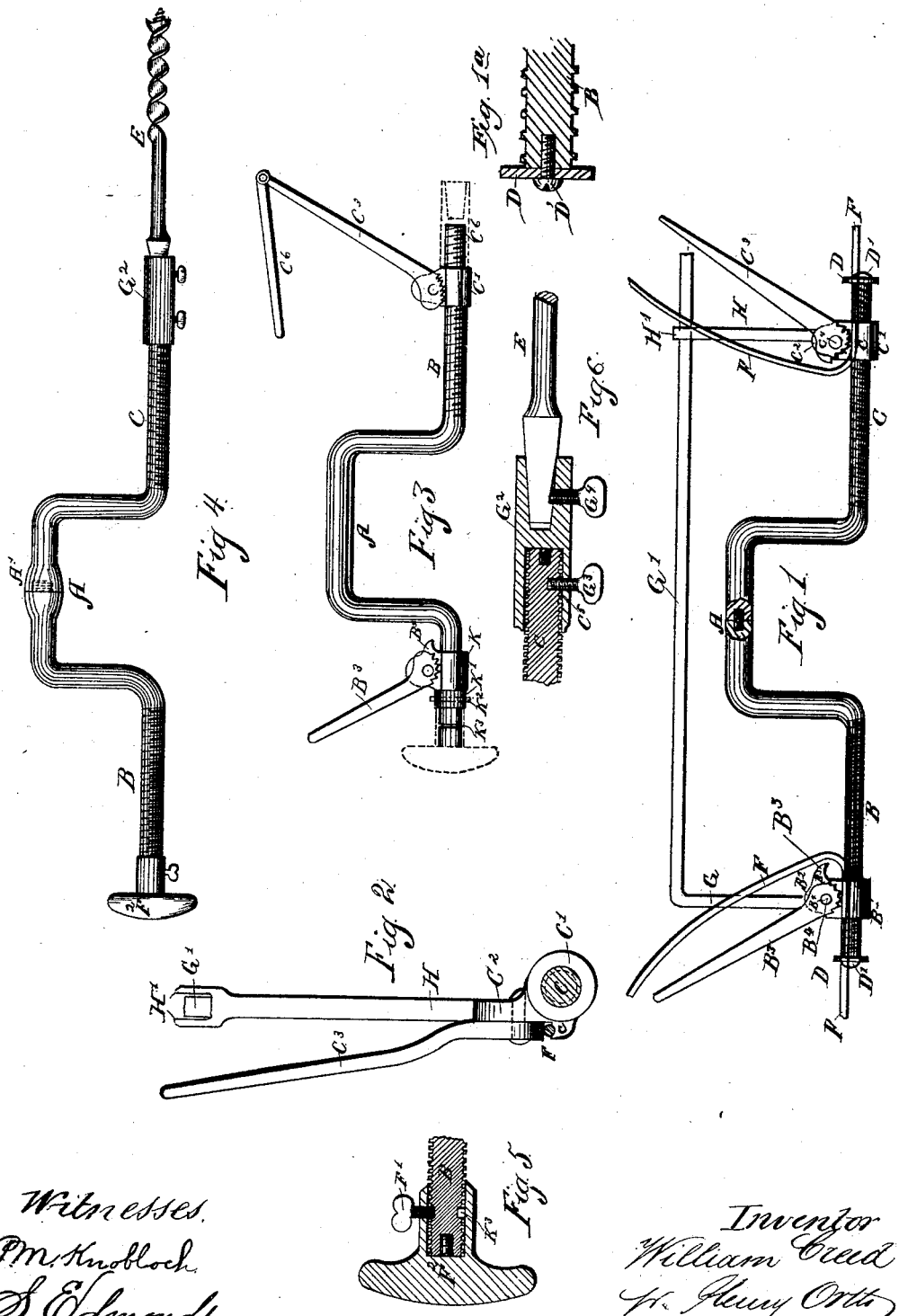
(No Model.)

W. CREED.

WIRE STRETCHER.

No. 342,428. Patented May 25, 1886.



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WILLIAM CREED, OF WARMATTA, NEAR COROWA, NEW SOUTH WALES.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 342,428, dated May 25, 1886.

Application filed September 6, 1884. Serial No. 142,441. (No model.) Patented in Victoria June 14, 1884, No. 3,742; in New Zealand July 17, 1884, No. 1,161; in South Australia, July 21, 1884, No. 468; in New South Wales August 29, 1884; in England September 5, 1884, No. 12,043; in Queensland February 16, 1885, and in Canada May 27, 1885, No. 21,743.

To all whom it may concern:

Be it known that I, WILLIAM CREED, a subject of the Queen of Great Britain, residing at Warmatta, near Corowa, in the British Colony of New South Wales, have invented an Improved Machine Convertible into a Wire Strainer or Auger, (for which I have received Letters Patent in the following countries, to wit: in Victoria dated June 14, 1884, No. 3,742; in New Zealand July 17, 1884, No. 1,161; in South Australia July 21, 1884, No. 468; in New South Wales August 29, 1884, but unnumbered; in Queensland February 16, 1885, but unnumbered; in Canada May 27, 1885, No. 21,743, and in Great Britain September 5, 1884, No. 12,043;) and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters and figures of reference marked thereon, which form a part of this specification.

My machine consists of a crank-spindle, the center or crank portion of which is plain for use as a handle, while the straight lengths, extending either way from the cranks, have cut in them a right-handed screw or thread at the one end and a left-handed screw or thread at the other. These screws each pass through suitably-tapped nuts having snugs formed on them on which to pivot the eccentric grippers, and also projections between which and the grippers the wire to be strained is compressed and held. In this construction the handle of the eccentric gripper will require to be made long enough (either in one length or by jointing it similar to a compass) to catch an adjacent wire, or, in the case of starting, to catch the ground below, so as to form a resistance while screwing up or straining. An alternative construction consists in adding an arm to each nut, one of which terminates in a forked end, and the other is bent at right angles, forming a parallel bar to the screwed spindle, its end resting in the forked termination of the other arm. By this means the parallel bar can be held by hand, and so form a resistance without the aid of an adjacent wire. There may, if preferred, be a joint in the crank, so as to enable the machine to fold up.

To convert this machine into an auger I provide a handle or knob, and a socket attachment for an auger-bit, and it can then be used for boring the holes through the posts.

Referring to the drawings, Figure 1 is a plan, Fig. 1ª, a detail view, and Fig. 2 an end view of my machine as a wire-strainer. Fig. 3 shows a single-ended and Fig. 4 a double-ended wire-strainer, the latter being jointed at the crank-handle, both of which may be converted into braces by the addition of the knob and socket, which are shown in section at Figs. 5 and 6.

In the figures, A is the crank or handle; B, the right-handed and C the left-handed screw extension or spindle of same; B′, the right-handed nut having the lug B^2 and hook B^3, to which may be hooked one end of a wire by forming a suitable loop at such end, such wire being thus held by the hook instead of being held by the gripping-lever thereon, and to which lug the eccentric lever B^3 is pivoted at B^4.

b is the projection against which the wire is compressed.

C′ is the left-handed nut, with its respective lug C^2, eccentric gripper C^3, pivot C^4, and projection *c*.

D D are washers held on ends of screw-spindle by the screw-studs D′ D′, to prevent nuts from being screwed off.

F is the wire between the grippers.

G G′ is the arm and parallel bar extension from lug B^2.

H is the arm-extension from lug C^2, on the end of which arm is formed the fork H′, which forms a guide for said parallel bar G′.

In Fig. 3, K is a swivel of the same outward form as the nut B′, previously described, and held in position by the loose collar K′, having the pin K^2 passing through it and its support, which also has the groove K^3 in it for affixing the knob, and at the other end a hole is drilled at C^5, so as to fix on the socket, and C^6 is the jointed extension of the gripper-arm.

In Fig. 4 the knob and socket are shown affixed in position, the latter having the auger-

bit E therein. A screw-joint, as shown, is formed in the crank-handle at A′ for convenience in transportation.

Fig. 5 shows the knob or handle F^2, held in position on the wire-strainer by the end of thumb-screw passing into the before-referred-to groove K^3, and Fig. 6 shows the auger-bit socket-piece G^2, held on the wire-strainer by the end of thumb-screw G^3, passing into the before-referred-to hole C^5.

G^4 is the thumb-screw for securing the bit in its socket.

The mode of operation of my machine as a wire-strainer is as follows: The machine is placed alongside any length of wire to be strained and the wire placed in and compressed between each gripper and its resistance. The wire is then cut and bent back clear of the crank, which is then rotated, with the result of drawing the two ends of the wire closer together or straining it; or the end of one of the wires may, by forming a loop thereon, be hooked on hook B^5, and so held instead of by the gripping-lever. When the strain is sufficient, the surplus wire is cut off, the ends joined, the gripper released, and the operation is completed.

When used as an auger for boring the holes in the posts, the nuts B′ and C′, with their attachments, are taken off, and the knob F^2 and socket G^2, with its bit E, are affixed in their respective positions. Then the brace may be used in the ordinary way.

By making the brace of two parts and joining the same by means of a screw, as shown, the stretcher may be taken to pieces and folded or arranged in a very compact and portable form, the parts adapted to be connected therewith either for use as a brace or a wire-stretcher, being constructed so as to be readily detached therefrom.

Having thus described the nature of my said invention and the manner of performing same, I would have it understood that what I claim is—

1. The herein described convertible tool, consisting of a brace having its crank-arms screw-threaded, as described, and wire-straining devices consisting of screw-threaded sleeves B′ C′, constructed to operate as a wire-strainer when applied to said crank-arms, jointly with a breast-plate and bit-stock constructed to be secured to the crank-arms in lieu of the sleeves B′ C′, for converting the wire-strainer into an auger, substantially as described.

2. The herein-described convertible tool, consisting of a brace formed in two sections detachably connected together having its crank-arms screw-threaded, as described, and wire-straining devices consisting of the screw-threaded sleeves B′ C′, constructed to operate as a wire-strainer when applied to said crank-arms, jointly with a breast-plate and bit-stock constructed to be secured to the crank-arms in lieu of the sleeves B′ C′, for converting the wire-strainer into an auger, substantially as described.

3. The combination of a brace having screw-threaded arms with sleeves fitted to said arms and provided with clamping-ledges, clamping-levers pivoted to the sleeves and operating with the ledges to hold the wire ends, and a fulcrum-bar connected with said sleeves to serve as a fulcrum for the brace, substantially as shown and described.

4. The combination, substantially as herein described, with the brace A, having screw-threaded arms B C, of sleeves B′ C′, having clamping-ledges *b c*, the clamping-levers B^3 C^3, a fulcrum-bar, and the retaining devices D D′, said parts being arranged for operation as set forth.

5. The combination, substantially as herein described, with the brace A, having its crank-arms B C screw-threaded, of the sleeves B′ C′, constructed to operate in conjunction with the crank-arms to hold the ends of adjacent wires and draw them together when the brace is rotated in the proper direction, fulcrum-bars G G′ H, and the retaining devices D D′, said parts being arranged for operation as set forth.

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Witnesses:
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